MUMINOV, F.A., Cand Geograph Sci—(diss) "The microclimate and thermal balance of the potato field." Tashkent, [Publishing House of the Acad Sci UzSSR], 1958. 11pp.(Acad Sci UzbekSSR. Institute of Mathematics and Mechanics im V.I.Romanovskiy). 150 copies.

(KL, 30-58, 105).

a

MUMINOV, P.A.

Main features of the microclimate in a potato field. Izv. AN Uz. SSR. Ser. fiz.-mat. nauk no.1:75-87 '58. (MIRA 11:6)
(Microclimatology) (Potatoes)

MUMINOV, F.A.

Radiation and thermal balance of the potato field. Uzb.biol. shur. no.3:71-78 '58. (MIRA 11:12)

1. Institut matematiki i mekhaniki im. V.I.Romanovskogo AN UzSSR.
(Potatoes) (Plants, Effect of temperature on)

SOV/50-58-8-8/18

AUTHOR: Muminov, F. A.

TITLE: On the Thermal Balance of the Active Surface of a Potato Field (O teplovom balanse deyatel'noy poverkhnosti kartofel'nogo polya)

PERIODICAL: Meteorologiya i gidrologiya, 1958, Nr 8, pp. 36-40 (USSR)

ABSTRACT: It is known that the character of the active surface of a potato field changes in the course of the plant development. Therefore 3 periods of the spring plantation and 4 of the summer plantation with different density of the plants were separated in the analysis of the balance (Table 1). Table 2 shows the mean values of the components of the thermal balance in the course of these different periods, measured in the Uzbekskaya ovoshche-kartofel'naya opytnaya stantsiya (Uzbek Experimental Station for Vegetables and Potatoes in the southern outskirts of the city of Tashkent. Therefrom the author draws the following conclusions: 1) The first vegetation period of potato is characterized by the fact that the heat consumption for the vaporization and the heat consumption for the heating of the air are approximately equal. 2) The second vegetation period is characterized by the predominating heat consumption for vaporization,

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though heat emission for the heating of air is still positive, however, not considerable. 3) The radiation heat and the heat absorbed from the air by the plants are consumed almost entirely for vaporization (mainly for transpiration). There are 3 tables.

MUMINOV, F.A.

Radiation and heat balance in the Sary-Tash region of the Alay Valley. Trudy Sred.-Az.nauch.-issl.gidrometeor.inst. no.2: 165-174 '59. (MIRA 13:6)
(Sary-Tash region (Osh Province)--Solar radiation)

MUMINOV, P.A.

Air temperature and humidity in fields covered by different farm crops. Trudy Sred.-Az.nauch.-issl.gidrometeor.inst. no.2: 175-184 '59. (MIRA 13:6)
(Microclimatology)
(Uzbekistan--Field crops)

24(8); 3(3)
AUTHOR: Muminov, F.A.

06381
SOV/166-59-5-8/9

TITLE: Daily Course of the Coefficient of Turbulence on a Potato Field

PERIODICAL: Izvestiya Akademii nauk Uzbekskoy SSR, Seriya fiziko-matematicheskikh nauk, 1959, Nr 5, pp 71-76 (USSR)

ABSTRACT: The author communicates the results of an experimental investigation of the heat exchange in the atmosphere over a potato field. The coefficient of turbulence, the velocity of the wind, and the coefficient of roughness were measured. Methods of Laykhtman, D.L. [Ref 3, 5, 8] were used. The experiments were carried out from May to September 1955. The experiments confirm the former measurements of T.V.Kirillova, L.V.Nesina, and T.A.Ogneva. The author mentions M.I.Budyko, A.M.Obukhov, A.S. Monin, M.P.Timofeyev, and A.R.Konstantinov.
There are 5 figures, 1 table, and 11 references, 9 of which are Soviet, 1 American, and 1 German.

ASSOCIATION: SANIGMI

SUBMITTED: March 20, 1959

Card 1/1

S/050/60/000/05/06/020
B007/B014

AUTHOR: Muminov, F. A.

TITLE: Some Characteristics of the Heat Balance of the Alayskaya Valley in the Region of Sary-Tash

PERIODICAL: Meteorologiya i gidrologiya, 1960, No. 5, pp. 28-31

TEXT: The Pamiro-Tyan'-Shan'skaya aerologicheskaya ekspeditsiya (Pamir-Tien-Shan Aerological Expedition) was organized in September, 1957 by the Institut matematiki i mekhaniki AN UzSSR (Institute of Mathematics and Mechanics of the AS Uzbekskaya SSR) together with the Sredneaziatskiy nauchno-issledovatel'skiy gidrometeorologicheskiy institut (Soviet Central Asia Hydrometeorological Scientific Research Institute). This expedition was carried out in accordance with the program of the International Geophysical Year. In addition to aerological observations, also actinometric and heat balance investigations were carried out in the Alayskaya valley near the hydrometeorological station of Sary-Tash ($\varphi = 39^{\circ}43'$, $\lambda = 73^{\circ}15'$, $h = 3153$ m). A. A. Tikhanovskaya and N. P. Kulikova participated in the operations along with the author. A brief

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Some Characteristics of the Heat Balance of the Alayskaya Valley in the Region of Sary-Tash

S/050/60/000/05/06/020
B007/B014

report on these operations is given here. Measurements included the radiation balance, the diffuse and direct solar radiation, the albedo, the turbulent heat exchange, the temperature and humidity of the air at 5 levels up to the 2 m height and the wind velocity at 5 levels up to 10 m height. The temperature of the upper soil layer (from 0 to 0.2 m) was studied. A total of 12 around-the-clock and 2 daylight series of observations was carried out in the time from September 2 to 27, 1957. Fig. 1 offers a diagram illustrating the around-the-clock course of the heat balance components. Observation data collected by B. D. Panin from September 4 to 27, 1958 at Tashkent are mentioned for comparison purposes. The heat flow in the soil was calculated by G. Kh. Tseytin's formula (Ref. 7). Table 2 supplies the values of the turbulence coefficient computed from formula (1). On the strength of the foregoing the following is stated: The daylight values of the radiation balance of the Alayskaya valley in the Sary-Tash region are considerably higher than those of the bare soil at Tashkent. Within 24 hours the radiation balance at Sary-Tash is by 159 cal/cm^2 larger than at Tashkent, which is due to the larger values of the direct solar radiation and the small values of the reflected solar radiation at Sary-Tash. During daylight time, more than half of

Card 2/3

Some Characteristics of the Heat Balance of the Alayskaya Valley in the Region of Sary-Tash

S/050/60/000/05/06/020
B007/B014

the radiation heat at Sary-Tash is used up for heating the air by way of the turbulent heat exchange. At nighttime, radiation heat losses (caused by the activity of the surface) are chiefly compensated by the heat upflow to the soil surface from deeper layers. There are 1 figure, 2 tables, and 7 Soviet references.

Card 3/3

MUMINOV, F.A.; KARAUL'SHCHIKOVA, N.N.

Features of the heat balance of a cotton field during the formation of the cotton ball under various conditions of moisture supply. Trudy Sred.-Az. nauch.-issl. gidrometeor. inst. no.12:14-19 '62. (MIRA 16:5)

(Crops and climate) (Cotton)

MUMINOV, F.A.; TUN TSIN-SHCHI

Temperature of the surface of cotton leaves. Trudy Sred.-Az. nauch.-issl. gidrometeor. inst. no.12:20-27 '62. (MIRA 16:5)
(Cotton) (Plant temperature)

MUMINOV, Fatikh Abdumalikovich; AYZENSHTAT, B.A., kand. fiz.-mat. nauk, red.; BELEN'KAYA, L.L., red.; ALEKSEYEV, A.G., tekhn.red.

[Thermal balance and meteorological characteristics of a potato field] Teplovoi balans i meteorologicheskii reshim kartofel'nogo polia. Leningrad, Gidrometeoizdat, 1963. 149 p. (MIRA 16:8)

(Uzbekistan--Potatoes)
(Uzbekistan--Meteorology, Agricultural)

MUMINOV, F.A.

Problems of the formation of the cotton yeild as related to the microclimate and heat balance of a cotton field. Trudy Sred.-Az.nauchn.-issl. gidrometeor. inst. no.16:61-74 '63.

Formation of temperature inversion on a potato field. Ibid.:75-79 (MIRA 17:6)

MUMINOV, I.M., akademik, otv. red.; DZHAMALOV, O.B., zam. otv. red.; KABULOV, V.K., zam. otv. red.; ABDUGANIYEV, A.A., red.; IBRAGIMOV, I.I., red.; UBAYDULLAYEV, I.Kh., red.; KISELEVA, V.N., red.

[Application of mathematical methods and electronic computers in economic research; conference materials] Primenenie matematicheskikh metodov i EVM v ekonomicheskikh issledovaniiakh; materialy konferentsii. Tashkent, Izd-vo "Nauka," UzSSR, 1965. 277 p. (MIRA 18:5)

1. Nauchnaya konferentsiya po voprosam primeneniya matematicheskikh metodov i EVM v ekonomicheskikh issledovaniyakh, Tashkent, 1963. 2. Chlen-korrespondent AN UzbekSSR (for Kabulov). 3. AN UzbekSSR (for Muminov).

MUMINOV, K.

MUMINOV, K., sportsmen 1-go razryada.

Ground trainer for parachutists. Kryl. rod. 8 no.12:8-9 D '57.
(Parachutists) (MIRA 10:12)

KHAMUDKHANOV, M.Z.; USMANOV, S.Z.; MUMINOV, K.

Automatic damping of unwanted oscillations in electromechanical systems with a rectifier converter. Dokl. AN Uz. SSR 21 no. 11: 31-35 '64. (MIRA 18:12)

1. Uzbekskiy nauchno-issledovatel'skiy institut energetiki i avtomatiki. 2. Chlen-korrespondent AN UzSSR (for Khamudkhanov). Submitted June 19, 1964.

LEVI, M.I.; SUCHKOV, Yu.G.; ORLOVA, G.M.; GERASYUK, L.G.; SHKOBA, A.M.; PEYSAKHIS, L.A.; STOGOVA, A.N.; LOPATINA, N.F.; SUKHARNIKOVA, N.A.; PAK, C.Y.; MUMINOV, K.M.; DOLSKAYA, T.N.; NASSONOV, L.C.; MEIDELMAN, V.I.; MURTAZANOVA, E.S.; STHEINMAN, A.I.; LAVRENTEV, A.F.; SAS[illegible], N.N.; KULOV, G.I.; GOLKOVSKY, G.M.; SALAMANOV, N.I.; ZALYGINA, N.I.

Significance of serological methods in the epizootological study of plague in wild rodents. J. hyg. epidem. (Praha) 8 no.4:422-427 '64.

1. Institute of Scientific Research, Rostov on the Don and Central Asian Institute of Scientific Research, U.S.S.R.

LEVI, M.I.; SUCHKOV, Yu.G.; ORLOVA, G.M.; GERASYUK, L.G.; SHKODA, A.M.; PEYSAKHIS, L.A.; STOGOVA, A.N.; LOPATINA, N.F.; SUKHARNIKOVA, N.A.; PAK, G.Yu.; MUMINOV, K.M.; DONSKAYA, T.N.; NASSONOV, L.S.; VEYNBLAT, V.I.; MURTAZANOVA, E.Sh.; SHTEL'MAN, A.I.; LAVRENT'YEV, A.P.; BASOVA, N.N.; GOLKOVSKIY, G.M.; KULOV, G.I.; SALAMOV, N.I.; ZALYGINA, N.I.

Results of the testing of the reactions of passive hemagglutination and neutralization of antibodies in the epizootologic examination of wild rodents for plague. Zhur. mikrobiol., epid. i immun. 40 no.12: 118-119 D '63. (MIRA 17:12)

1. Iz Rostovskogo i Sredne Aziatskogo protivochumnykh institutov, Chimkentskoy, Taldy-Kurganskoy, Aralomorskoy, Turkmenskoy, Astrakhanskoy i Frunzenskoy protivochumnykh stantsiy.

MUMINOV, Kh.

Irrigation conditions for Sorghum cernuum in the Kara-Kalpak A. S. S. R. Zemledelie 24 no.10:28-31 O '62. (MIRA 15:11)
(Kara-Kalpak A. S. S. R.--Sorghum--Irrigation)

MUMINOV, Kh.

Effect of supplementary fertilizers on the yield of sorghum.
Zemledelie 25 no.6:76-78 Je '63. (MIRA 16:7)

1. Uzbekskiy nauchno-issledovatel'skiy institut shivotnovovdstva.
(Uzbekistan—Sorghum—Fertilizers and manures)

YAKUBOV, A.Ya.; MUMINOV, Kh.U.

Determination of the energy expenditure by cotton-growing collective farmers. Zdrav. Tadzh. 8 no. 2:45-47 '61. (MIRA 14:4)

1. Iz Stalinabadskogo instituta epidemiologii i gigiyeny.
(METABOLISM) (COTTON GROWING—HYGIENIC ASPECTS)

MUMINOV, Kh.U.

Silicosis prevention in some Tajik mines. Zdrav. Tadzh. 9 no.1: 23-25 Ja-F '62. (MIRA 15:4)

1.Iz Dushanbinskogo instituta epidemiologii i gigiyeny.
(TAJIKISTAN--MINE DUSTS) (LUNGS--DUST DISEASES)

MUMINOV, M.M

Determining the densities of NaCl aqueous solutions by the absorption method of gamma rays. Trudy UzGU no.59:55-61 '55.
(Specific gravity) (Salt) (Gamma rays) (MIRA 10:12)

MUMINOV, M.M.

ATKHIEV, G.D.

PHASE I BOOK EXPLOITATION SOV/5410

Tashkentskaya konferentsiya po mirnomu ispol'zovaniyu atomnoy energii, Tashkent, 1959.

Trudy (Transactions of the Tashkent Conference on the Peaceful Uses of Atomic Energy) v. 2. Tashkent, Izd-vo AN UzSSR, 1960. 449 p. Errata slip inserted. 1,500 copies printed.

Sponsoring Agency: Akademiya nauk Uzbekskoy SSR.

Responsible Ed.: S. V. Starodubtsev, Academician, Academy of Sciences Uzbek SSR. Editorial Board: A. A. Abdullayev, Candidate of Physics and Mathematics; D. M. Abdurasulov, Doctor of Medical Sciences; U. A. Arifov, Academician, Academy of Sciences Uzbek SSR; A. A. Borodulina, Candidate of Biological Sciences; V. N. Ivashev; G. S. Ikramova; A. Ye. Kiv; Ye. M. Lebanov, Candidate of Physics and Mathematics; A. I. Nikolayev, Candidate of Medical Sciences; D. Nishanov, Candidate of Chemical Sciences; A. S. Sadykov, Corresponding Member, Academy of Sciences USSR, Academician, Academy of Sciences Uzbek SSR; Yu. N. Talanin,

Card 1/20

Transactions of the Tashkent (Cont.) SOV/5410

Candidate of Physics and Mathematics; Ya. Kh. Turakulov, Doctor of Biological Sciences. Ed.: R. I. Khamidov; Tech. Ed.: A. G. Babakhanova.

PURPOSE : The publication is intended for scientific workers and specialists employed in enterprises where radioactive isotopes and nuclear radiation are used for research in chemical, geological, and technological fields.

COVERAGE: This collection of 133 articles represents the second volume of the Transactions of the Tashkent Conference on the Peaceful Uses of Atomic Energy. The individual articles deal with a wide range of problems in the field of nuclear radiation, including: production and chemical analysis of radioactive isotopes; investigation of the kinetics of chemical reactions by means of isotopes; application of spectral analysis for the manufacturing of radioactive preparations; radioactive methods for determining the content of elements in the rocks; and an analysis of methods for obtaining pure substances. Certain

Card 2/20

instruments used, such as automatic regulators, flowmeters, level gauges, and high-sensitivity gamma-relays, are described. No personalities are mentioned. References follow individual articles.

TABLE OF CONTENTS:

RADIOACTIVE ISOTOPES AND NUCLEAR RADIATION IN ENGINEERING AND GEOLOGY

MUMINOV, M.; KHAYDAROV, Kh.

Gamma ray absorption by baked bricks. Trudy UzGu no.117: 3-11 '62. (MIRA 16:7)

(Shielding (Radiation))

BADALOV, N.; MUMINOV, M.

Attenuation of gamma rays by wool and cotton. Trudy UzGu no.117:41-44 '62. (MIRA 16:7)

(Shielding (Radiation))

MUMINOV, M.

Some wild plants as weak radioactive sources. Trudy UzGu no.117:93-98 '62. (MIRA 16:7)

(Radioactivity—Measurement)

21.5250

S/058/63/000/001/031/120
A062/A101

AUTHORS: Muminov, M., Khaydarov, Kh.

TITLE: Absorption of γ-rays by burnt bricks

PERIODICAL: Referativnyy zhurnal, Fizika, no. 1, 1963, 68, abstract 1A586 ("Tr. Samarkandsk. un-ta", 1962, no. 117, 3 - 11)

TEXT: An experimental study was made on the attenuation of a wide and a narrow γ-ray beam passing through an absorber of complex composition (burnt brick). As a source of γ-radiation a preparation of Co^{60} was used. Recording of the γ-radiation was carried out with the aid of a Geiger-Müller counter and a B-type installation. The results of the measurements are presented in the form of a series of diagrams.

[Abstracter's note: Complete translation]

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L 56546-65 EWG(j)/EWP(j)/EWA(h)/EWT(m)/T/EWA(l) Pc-4/Peb RM

ACCESSION NR: AP5014360 UR/0205/65/005/002/0309/0309

AUTHOR: Kabulov, D. T.; Muminov, M. M.; Ismailov, F. I.

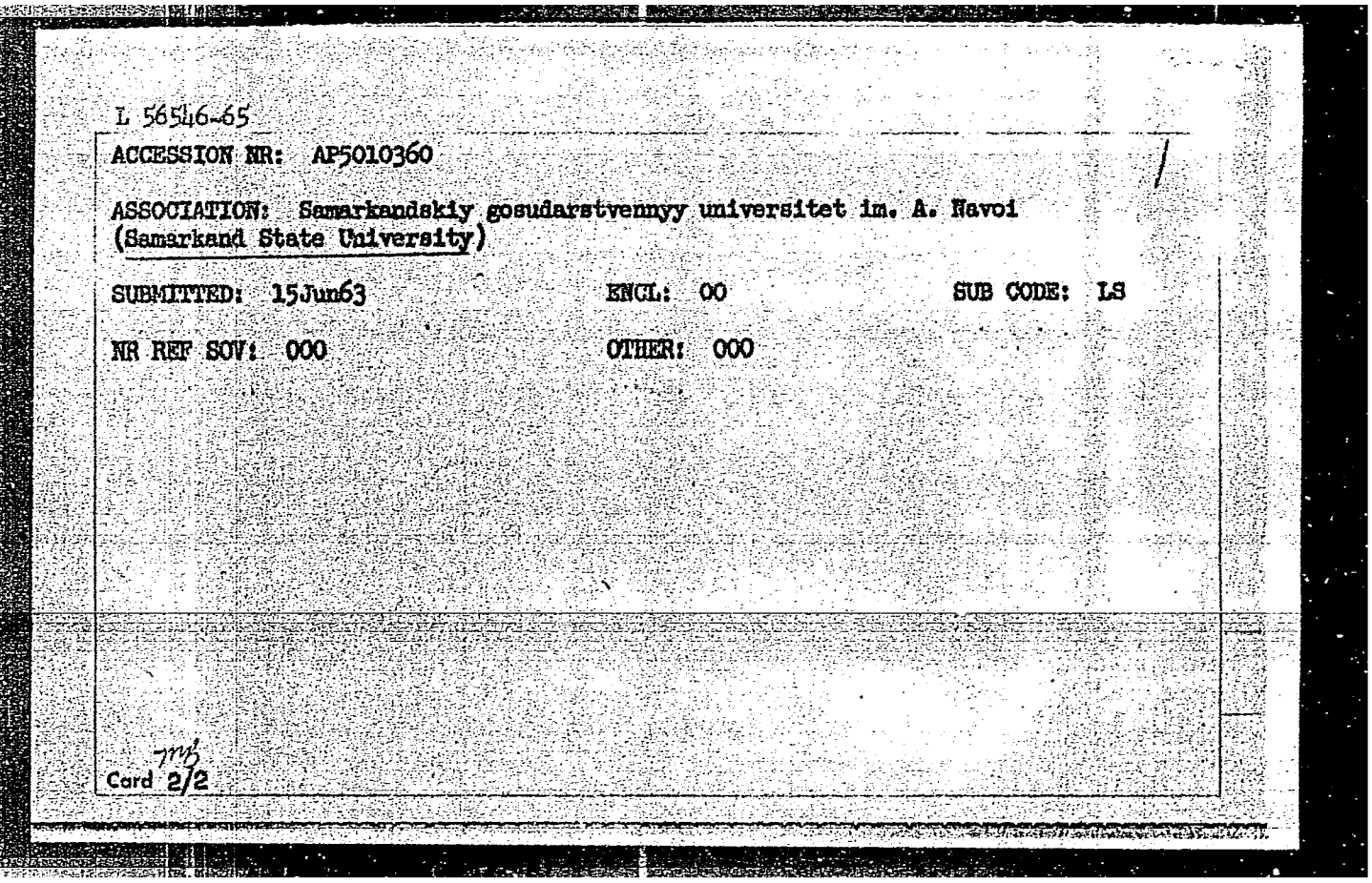
TITLE: The effect of small gamma-irradiation doses on growth and development of cotton

SOURCE: Radiobiologiya, v. 5, no. 2, 1965, 309

TOPIC TAGS: cotton, seed, gamma-irradiation, irradiation effect, single radiation dose, growth stimulation, plant culture

ABSTRACT: In experiments conducted in 1959-61 seeds of 108-F cotton and hybrid No. 21 cotton were gamma-irradiated with single doses of 200 to 1400 r before sowing to determine the effects of irradiation on growth and yield. Results show that plants grown from irradiated seeds are characterized by higher plant density per hectare, increased number of bolls per plant, and a higher yield than plants grown from nonirradiated seeds. The optimal radiation dose proved to be 600 r. Irradiation with 600-800 r doses produced the most favorable germination of seeds, plant density, and yield. Orig. art. has: 1 table.

Card 1/2



L 56546-65

ACCESSION NR: AP5010360

ASSOCIATION: Samarkandskiy gosudarstvennyy universitet im. A. Navoi (Samarkand State University)

SUBMITTED: 15Jun63 ENCL: 00 SUB CODE: LS

NR REF SOV: 000 OTHER: 000

Card 2/2

L 00723-66 FSS-2/EWT(l)/EWP(m)/FCS(k)/ETC(m)/EWA(l) WW

ACCESSION NR: AT5013293 UR/3043/65/000/004/0242/0254

AUTHOR: Kuznetsov, M. M.

TITLE: The calculation of gas motion through tubes by replacing the gas with a system of particles with a finite number of degrees of freedom

SOURCE: Moscow. Universitet. Vychislitel'nyy tsentr. Sbornik rabot, no. 4, 1965. Chislennyye metody v gazovoy dinamike (Numerical Methods in gas dynamics), 242-254

TOPIC TAGS: interior ballistics, gas flow, cylindric flow, mathematic model

ABSTRACT: After surveying earlier works on interior ballistics, the author stresses that there are no analytical solutions of the problem in existence yet and that several researchers of the Vychislitel'nyy tsentr (Computer Center) of the MGU carried out approximate calculations using the method of characteristics or the method of differences. To avoid the calculations connected with these methods, the author proposes a new method allowing the calculation of gas motion within the tube of variable profile to be specified by sectionally smooth functions. It assumes unidimensional motion, but replaces the partial differential equations of gas motion with a system of ordinary differential equations representing the equations of motion of a system of material particles representing in an idealized manner

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L 00723-66

ACCESSION NR: AT5013293

3

cross sectional gas layers of small thickness containing a certain mass and subjected to a force generated by the difference in pressure across both sides of the layer. Graphs comparing the results calculated using the new approach with those obtained by analytical or other approximate means indicate that this fast method supplies with a sufficient accuracy the velocity of the projectiles and the parameters of the gas in motion. Orig. art. has: 16 formulas and 9 figures.

ASSOCIATION: Vychislitel'nyy tsentr, Moskovskiy universitet (Computer Center, Moscow University)

SUBMITTED: 00 ENCL: 00 SUB CODE: MA, ME

NO REF SOV: 004 OTHER: 002

Card 2/2

MUMINOV, M.

Radioactivity in the most widespread weeds. Izv. AN Uz. SSR.Ser. fiz.-mat.nauk 8 no.5:68-70 '64. (MIRA 18:2)

1. Samarkandskiy gosudarstvennyy universitet imeni Alishera Navoi.

KABULOV, D.T.; MUMINOV, M.M.; ISMAILOV, F.I.

Isotopes raise the productivity of cotton. Priroda 53 no. 11: 93 '64. (MIRA 18:1)

1. Samarkandskiy gosudarstvennyy universitet im. Alishera Navoi.

MUMINOV, P.

Materials on helminths of wild carnivorous animals of Uzbekistan.
Uzb. biol. zhur. 7 no.6:44-49 '63. (MIRA 17:6)

1. Institut zoologii i parazitologii AN UzSSR.

MUMINOV, P.

Helminths parasitic in the fox Vulpes vulpes Karagan Erxl., 1777 inhabiting the Keles massif. Uzb. biol. zhur. no. 6:53-57 '60.
(MIRA 14:2)

1. Institut zoologii i parazitologii AN UzSSR.
(KELES VALLEY--WORMS, INTESTINAL AND PARASITIC)
(PARASITES--FOXES)

MUMINOV, P.; ALLAYAROV, A.M.

Helminths of wild cats of Uzbekistan and their relation to the ecology of host animals. Uzb. biol. zhur. 7 no.6: 17-24 '63. (MIRA 17:6)

1. Institut zoologii i parazitologii AN UzSSR.

L 27549-66 EWT(1)/EWT(m)/ETC(f)/EPF(n)-2/EWG(m)/EWP(t)/ETI IJP(c) JD/AT

ACC NR: AP6012465 SOURCE CODE: UR/0181/66/008/004/1083/1087

AUTHOR: Shotov, A. P.; Grishechkina, S. P. Kopylovskiy, B. D.; Muminov, R. A.

ORG: Physics Institute im. P. N. Lebedev, AN SSSR, Moscow (Fizicheskiy institute AN SSSR)

TITLE: Spontaneous and coherent emission of electron-hole plasma of indium antimonide

SOURCE: Fizika tverdogo tela, v. 8, no. 4, 1966, 1083-1087

TOPIC TAGS: indium antimonide, semiconductor laser, recombination radiation, forbidden band, electron recombination

ABSTRACT: The authors investigate the spontaneous and stimulated recombination radiation from an electron-hole plasma in InSb in magnetic fields up to 15,000 G. Coherent radiation was achieved in a field of 14,000 G and at injection currents ~2 x 10^4 a/cm^2 at 0.4 μsec pulse duration effected at two levels corresponding to the two different values of the electron spin of the first Landau level when split by the magnetic field. The plasma was produced in relatively pure p-type InSb by injection through rectifying contacts. The volt-ampere characteristics in the forward direction disclose a negative-resistance section due to modulation of the conductivity within the crystal by double injection of electrons and holes from the two contacts. The spontaneous-emission spectrum taken at 10K and at a current of 5a, obtained in response to 0.4 μsec pulses at a repetition rate of 85 pps, exhibited a maximum at 235.5 Mev, which is in good agreement with the width of the forbidden band at this temperature. This relates the

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L 27549-66

ACC NR: AP6012465 4

spectrum to direct radiative interband recombination of the electron-hole pairs. The authors have also observed other spectra with maxima corresponding to lower energy (234 Mev) and to a larger spectral width. These probably pertain to compensated p-type samples in which the edge of the energy band is distorted by impurity states. Such crystals are now under study. The authors thank B. M. Vul for a discussion of the results, and A. V. Babushkin, Yu. N. Korolev, and L. M. Novak for help with the work. Orig. art. has: 7 figures and 2 formulas. [02]

SUB CODE: 20/ SUBM DATE: 16Aug65/ ORIG REF: 003/ OTH REF: 011/ ATD PRESS: 4260

Card 2/2 BLQ

L 45568-66 EWT(l)/EWT(m)/EEC(k)-2/EWP(k)/T/EWP(t)/ETI IJP(c) AT/WG/JD
ACC NR: AP6026720 SOURCE CODE:: UR/0181/66/008/008/2496/2497

AUTHOR: Shotov, A. P.; Grishechkina, S. P.; Muminov, R.A.

ORG: Physics Institute im. P. N. Lebedev, AN SSSR, Moscow (Fizicheskiy institut AN SSSR)

TITLE: Generation of coherent radiation in an indium antimonide electron-hole plasma

SOURCE: Fizika tverdogo tela, v. 8, no. 8, 1966, 2496-2497

TOPIC TAGS: solid state laser, electron plasma, indium antimonide, semiconductor laser

ABSTRACT: The authors present new data on an InSb semiconductor laser operating at 4.2K, which with respect to some parameters (generation at relatively weak magnetic fields of $\sim$4 koe, relatively large pulse durations up to 10 μsec, low threshold currents, and operations which are close to the single mode) is superior to InSb lasers described in the literature. The laser was prepared from p-type, high-purity InSb (concentration $p \simeq 2 \cdot 10^{13}$ cm^{-3}, $\sim$ 6000 cm^2/v. sec at 77K). It is shown (Fig. 1) that the threshold generation current (I_{thr}) with an increase in the magnetic field (H_z) first decreases sharply, then rises slightly. The laser operated satisfactorily when the pulse duration was increased to 10 μsec with a repetition frequency of $\sim 10^3$ cps.

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L 45568-66
ACC NR: AP6026720

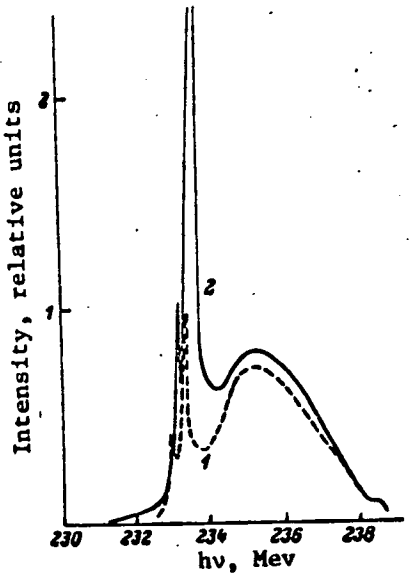

Figure 1. Radiation spectrum of an InSb laser at H_z = 4.5 koe, and T = 4.2K
I, a: 1 — 15, 2 — 18

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Beam directivity was ≃ 4° in both the vertical and horizontal planes, which indicates that the width of the generation region is at least 70 μ. The authors thank A. V. Babushkina, Yu. N. Korolev, and L. M. Novak for assistance in the work. Orig. art. has: 2 figures. [26]

SUB CODE: 20/ SUBM DATE: 18Feb66/ ORIG REF: 001/ OTH REF: 002 / ATD PRESS: 5083

L 32722-66 EWT(1)/ETC(f) IJP(c) AT

ACC NR: AP6020207 SOURCE CODE: UR0056/66/050/006/1525/1528

AUTHOR: Shotov, A. P.; Grishechkina, S. P.; Muminov, R. A.

ORG: Physics Institute im. P. N. Lebedev, Academy of Sciences SSSR (Fizicheskiy institut Akademii nauk SSSR)

TITLE: Pinch effect in a degenerate plasma of indium antimonide

SOURCE: Zh eksper i teor fiz, v. 50, no. 6, 1966, 1525-1528

TOPIC TAGS: indium compound, antimonide, semiconductor plasma, plasma pinch, magnetic pinch, recombination radiation, volt ampere characteristic

ABSTRACT: Unlike in earlier experiments, where the pinch effect was produced in a nondegenerate semiconductor plasma, the authors were able, by injecting carriers into indium antimonide through contacts, to obtain at large current densities (~10^4 a/cm^2) and helium temperatures (4.2K) a high degree of degeneracy in an electron-hole plasma and a pronounced pinch effect. The degeneracy of the plasma was confirmed by the coherent emission of the crystal and by its recombination spectrum. The pinch effect was observed and investigated by two independent methods - measurement of the electric conductivity of the plasma (volt-ampere characteristic) and by measurement of the spectra of recombination radiation of the electron-hole pairs, using a method described by the authors earlier (FTT v. 8, 1083, 1966). The investigations were made on relatively pure p-type InSb single crystals. Carrier injection was in short pulses (~1 μsec) repeated at ~100 cps. The presence of the pinch effect was manifested

Card 1/2

L 32722-66

ACC NR: AP6020207 4

by a reduction in the slope of the volt-ampere characteristic and by a shift of the peak of the emission spectrum with increasing current density and decreasing magnetic field (at a current of ~10 amp or ~5 x 10^3 amp/cm^2). The spectrometric method is apparently more sensitive to the pinch effect than the electric conductivity method. The emission spectra also make it possible to determine the degree of degeneracy of the plasma and the diameter of the pinch (~10^{-2} cm and decreasing with increasing current). The authors thank B. M. Vul and V. A. Chuyenkov for a discussion of the results and A. V. Babushkin and L. M. Novak for help with the work. Orig. art. has: 3 figures and 8 formulas. [02]

SUB CODE: 20/ SUBM DATE: 28Jan66/ ORIG REF: 003/ OTH REF: 004/ ATD PRESS: 5125

Card 2/2 JS

ACC NR: AP7006128 SOURCE CODE: UR/0056/67/052/001/0071/0078

AUTHOR: Shotov, A. P.; Grishechkina, S. P.; Muminov, R. A.

ORG: Physics Institute im. P. N. Lebedev, Academy of Sciences, SSSR (Fizicheskiy institut Akademii nauk SSSR)

TITLE: Pinch effect in a degenerate plasma in longitudinal and transverse magnetic fields

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 52, no. 1, 1967, 71-78

TOPIC TAGS: plasma pinch, semiconductor plasma, semiconductor carrier, carrier density, electron recombination, plasma magnetic field, recombination radiation, volt ampere characteristic, indium compound, antimonide, ELECTRON HOLE

ABSTRACT: This is a continuation of earlier work (ZhETF v. 50, 1525, 1966) dealing with the pinch effect in indium antimonide. In the present study the authors used the procedures of the earlier investigation (recombination-radiation spectrometry and conductivity measurements), and also measurements of the recombination rate, to investigate the pinch effect of a degenerate electron-hole plasma of InSb in the presence of a transverse and a longitudinal magnetic field. The degenerate plasma was produced by injection of carriers with rectangular current pulses of duration 10^{-6} sec at a repetition rate of ~100 cps. The measurements were made at 4.2K and at currents ranging from 7 to 12 amp, in fields up to 400 Oe. From an analysis of the obtained spectra of recombination radiation at various currents and fields, the

UDC: none

Card 1/2

MUMINOV, Sh. Cand Agr Sci -- (diss) "Industrial experiment of the reclamation of saliferous and swamped virgin soils and waste lands in the kolkhoz im Chkalov, Kuvinskiy Rayon, Ferganskaya Oblast, of the Uzbek SSR." Tashkent, 1958. 24 pp (Uzbek Acad Agr Sci. Tashkent Agr Inst), 130 copies. (KL, 14-58, 115)

MUMINOV, Sh.A.; KARABAYEV, K.K.; DZHAMALOV, D.

New sections of the manifestation of basic and superbasic intrusions in eastern Fergana. Uzb. geol. zhur. 9 no.5:74-80 '65. (MIRA 18:11)

1. Institut geologii i geofiziki im. Kh.M. Abdullayeva AN UzSSR. Submitted February 23, 1965.

MUMINOV, S.Z.; BERING, B.P.; SERPINSKIY, V.V.

Capillary condensation thermodynamics. Izv.AN SSSR. Ser.khim. no.1:43-55 '66. (MIRA 19:1)

1. Institut fizicheskoy khimii AN SSSR. Submitted July 3, 1965.

MUMINOV, T. G.

"The Root System of the Plum and Correlation Between Underground and Above-Ground Parts of the Plant." Cand Agr Sci, Tashkent Agricultural Inst, Tashkent, 1953. (RZhBiol, No 5, Nov 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (11)

SO: Sum. No.521, 2 Jun 55

MUMINOV, T.G.

Restoration of the plum root system following injury. Dokl.AN Uz. SSR no.11:55-60 '56. (MIRA 13:6)

1. Plodovo-yagodnyy institut imeni akad. R.R.Shredera. Predstavleno akad.AN UzSSR Ye.P. Korovinym.
(Plum) (Roots (Botany)) (Regeneration (Botany))

MUMINOV, T.G.

Dynamics of annual growth rates in cherry-plum seedlings and plum plants in Uzbekistan. Uzb.biol.zhur. no.3:63-69 '58.
(MIRA 11:12)

1. Institut sadovodstva, vinogradarstva i vinodeliya im. akademika R.R.Shredera Uzbekskoy akademii sel'skokhozyaystvennykh nauk.
(Uzbekistan--Plum)

KOREYSHA, Z.I.; MUMINOV, T.G.

Changes in the growth and development of the peach induced by lower temperatures acting on germinating seeds. Fiziol. rast. 7 no.1:89-91 '60. (MIRA 13:5)

1. Uzbek Scientific Research Institute of Horticulture, Viticulture and Wine Making.
(Peach) (Germination)

L 45793-65 EWT(l)/EEC(t)/EWA(m)-2

ACCESSION NR: AP5009149 S/0166/65/000/001/0057/0059

20
19
B

AUTHOR: Starodubtsev, S. V.; Muminov, V. A.

TITLE: Ionic source with longitudinal magnetic field

21

SOURCE: AN UzSSR. Izvestiya. Seriya fiziko-matematicheskikh nauk, no. 1, 1965, 57-59

9

TOPIC TAGS: ion source, hydrogen discharge, ionization, impact ionization, oscillating discharge

ABSTRACT: The source described is based on the fact that a larger density of fast-electron current can be produced in an oscillating discharge produced in a longitudinal magnetic field, which causes the electrons to travel along helical trajectories and thereby increases the average distance traveled between electrodes and with it the ionization probability. The source developed was intended for the production of hydrogen ions, and is illustrated in Fig. 1 of the Enclosure. This discharge current reached 0.5 A and the field 750 Oe. The voltage was adjustable between 0 and 1000 V. The working pressure was 2×10^{-4} mm Hg. Discharge could

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L 45793-65
ACCESSION NR: AP5009149

be produced when the field reached 180 Oe, and saturation set in above 500 Oe. The drawing voltage could be adjusted from 2 to 1000 kV. The maximum ionic current reached 17 mA. Orig. art. has: 3 figures.

ASSOCIATION: Institut yadernoy fiziki AN UzSSR (Institute of Nuclear Physics, AN UzSSR)

SUBMITTED: 24Feb64 ENCL: 01 SUB CODE: EM, GC

NR REF SOV: 002 OTHER 002

Card 2/3

L 2524-66 EWT(1)/EWT(m)/EPA(sp)-2/EPF(c)/EPA(w)-2/EWP(t)/EWP(b) IJP(c) JD/AT
ACCESSION NR: AP5020859 UR/0166/65/000/004/0079/0080

AUTHOR: Starodubtsev, S. V.; Mumínov, V. A.; Babal'yants, V. F.; Abdurakhmanov, A. Kh.

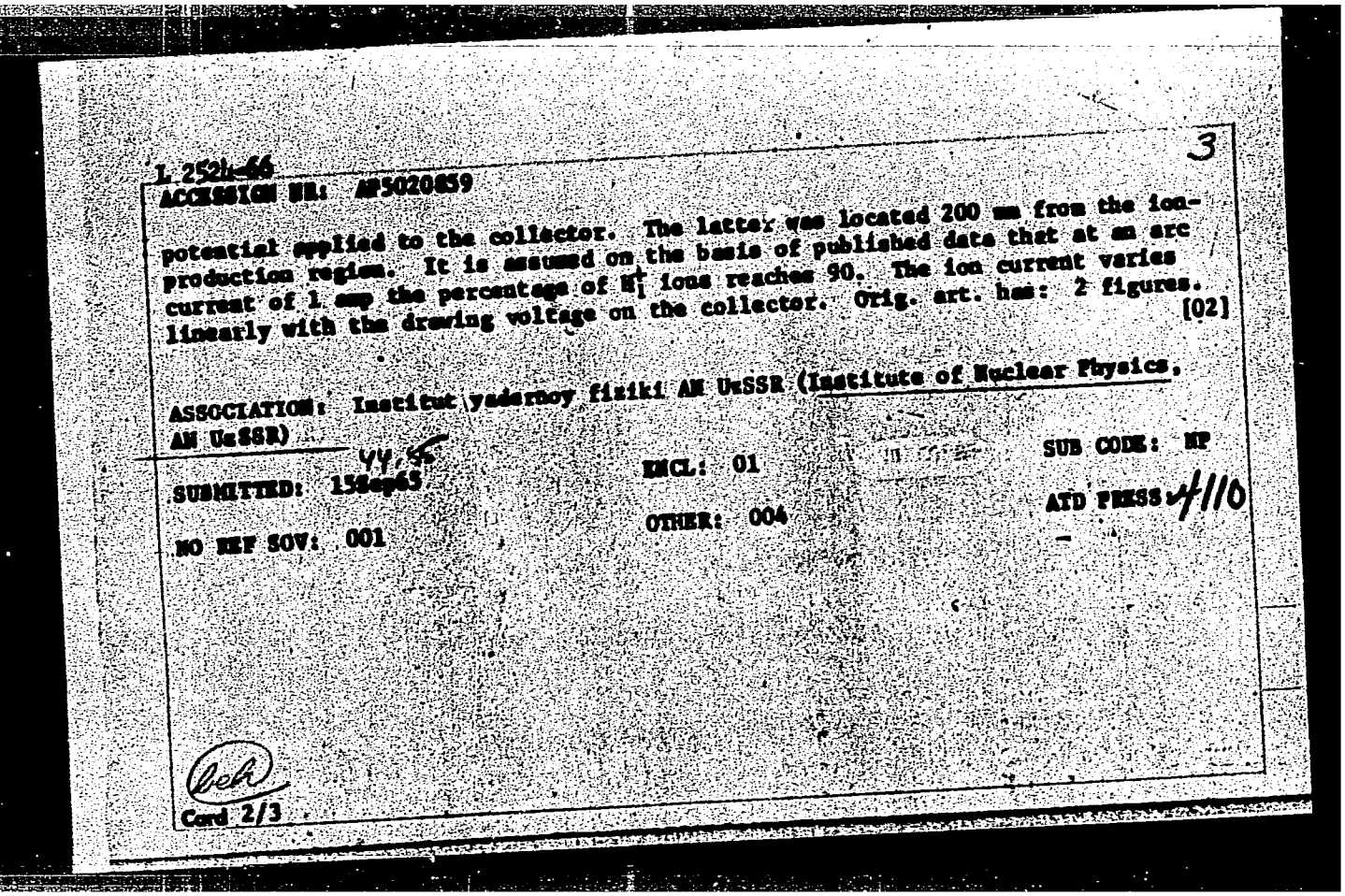
TITLE: Ion source of hydrogen ions at low gas pressures

SOURCE: AN UzSSR. Izvestiya. Seriya fiziko-matematicheskikh nauk, no. 4, 1965, 79-80

TOPIC TAGS: hydrogen ion, ion source, low pressure

ABSTRACT: The article describes a source in which the generated ions are drawn out in a direction perpendicular to the source, as shown in Fig. 1 of the Enclosure. The frame of the source consists of two 590-mm steel rings connected by eight stainless steel tubes 14 mm in diameter and 1900 mm long. The anode and cathode are in the form of 0.5-mm tungsten wires suspended from insulated sleeves on the framing tubes. The wires are alternately incandescent and cold, and the potential difference applied to them ignites the discharge. The source assembly is placed in a vacuum chamber of approximately 600-ℓ capacity evacuated with an oil-diffusion pump to 10^{-5} mm Hg. Hydrogen gas is fed in at a working pressure of $(2-4) \times 10^{-4}$ mm Hg. The discharge current ranged from 0.6 to 1 amp at an electrode potential on the order of 1.5 kv and a filament current of 32 amp, depending on the high negative

Card 1/3



L 2524-66
ACCESSION NR: AP5020859

3

potential applied to the collector. The latter was located 200 mm from the ion-production region. It is assumed on the basis of published data that at an arc current of 1 amp the percentage of H_1^+ ions reaches 90. The ion current varies linearly with the drawing voltage on the collector. Orig. art. has: 2 figures. [02]

ASSOCIATION: Institut yadernoy fiziki AN UzSSR (Institute of Nuclear Physics, AN UzSSR)

SUBMITTED: 15Sep65 ENCL: 01 SUB CODE: NP

NO REF SOV: 001 OTHER: 004 ATD PRESS: 4110

Card 2/3

L 2924-66
ACCESSION NR: AP5020859

ENCLOSURE: 01

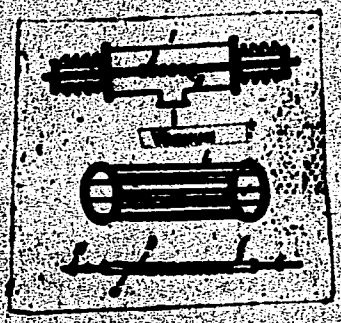


Fig. 1. Ion source

T - Vacuum chamber; L - frame;
Z - electrode; K - quartz tube;
D - yoke; M - porcelain bead;
S - grid.

Card 3/3

FAYBUSHEVICH, V.M.; MUMINOV, Ya.K.

Mineral waters of Uzbekistan and possibilities for their use in digestive diseases. Izv.AN Uz.SSR.Ser.med. no.4: 11-14 '58. (MIRA 12:5)

1. Uzbekskiy gosudarstvennyy nauchno-issledovatel'skiy institut kurortologii i fizioterapii im. Semashko.
(UZBEKISTAN--MINERAL WATERS) (DIGESTIVE ORGANS--DISEASES)

MUMINOV, Ya.K., KETKO, M.I.

Some new ways of organizing resort therapy in Uzbekistan. Vop. kur., fizioter. i lech. fiz. kul't. 23 no.5:440-442 S-O '58 (MIRA 11:11)

1. Iz Uzbekskogo nauchno-issledovatel'skogo instituta kurortologii i fizioterapii imeni N.A. Semashko (dir. - dotsent Ya.K. Muminov, nauchnyy rukovidtel' - prof. V.M. Faybushevich).
(UZBEKISTAN--HEALTH, RESORTS, WATERING PLACES, ETC.)

MUMINOV, Ya.K., dotsent

Introduction. Trudy Uz. gos. nauch.-issl. inst. kur. i fizioter. no.15:3-4 '59. (MIRA 14:9)

1. Direktor Uzbekskogo gosudarstvennogo nauchno-issledovatel'skogo instituta kururtologii i fizioterapii im. N.A.Semashko. (TASHKENT--MINERAL WATERS)

MUMINOV, Ya.K., dotsent; KETKO, M.I., starshiy nauchnyy sotrudnik

Organizational problems of health resorts and sanatoriums in Uzbekistan during the 7-year plan 1959-1965. Trudy Uz. gos. nauch.-issl. inst. kur. i fizioter. no.15:5-17 '59. (MIRA 14:9)
(UZBEKISTAN--HEALTH RESORTS, WATERING PLACES, ETC.)

MUMINOV, Ya.K.; KOBTUASHVILI, B.Ya., red.; NAUMOV, A.A., tekhnred.

[On the history of health resort treatment in Central Asia] U istokov kurortnogo lecheniia v Srednei Azii. Tashkent, Gos.med. izd-vo M-va zdravookhraneniia UzSSR, 1960. 30 p.
(MIRA 14:3)
(SOVIET CENTRAL ASIA--HEALTH RESORTS, WATERING PLACES, ETC.)

MUMINOV, Ya.K., dotsent; KETKO, M.I., dotsent

All-Union Conference on Aero- and Hydroaeroionization. Vop. kur., fizioter. i lech. fiz. kul't. 26 no.3:280-285 My-Je '61. (MIRA 14:7)

(AIR, IONIZED—THERAPEUTIC USE)

MUMINOV, Ya.K.; KATSENOVICH, R.A.; KETKO, M.I.

Coordination of the work of health resorts and physiotherapeutic institutions of the republics of Central Asia. Vop. kur., fizioter. i lech. fiz. kul't. 30 no.1:80-82 Ja-F '65. (MIRA 18:8)

1. Uzbekskiy institut kurortologii i fizioterapii imeni N.A. Semashko (direktor - Ya.K. Muminov), Tashkent.

MUMINOV, Ya.K., dotsent

Aktash Health Resort. Sbor.trud.Uz.gos.nauch.-issl.inst.kur. i fizioter. 17:51-53 '62. (MIRA 17:7)

MUMINOVA, R.M.

Effect of Helichrysum on water-salt metabolism in cardiovascular insufficiency. Trudy Inst. kraev. eksper. med. no.3:20-23 '61. (MIRA 15:5)

(HELICHRYSUM) (CARDIOVASCULAR SYSTEM—DISEASES)
(SALT IN THE BODY) (WATER IN THE BODY)

MERKINOVA, R.M.

Gas exchange in patients with blood circulation insufficiency during treatment with oliteriside and Strophanthus infusion. Vop.biol.i klaev.med. no.3:222-224 '62. (MIRA 16:3)
(BLOOD—CIRCULATION, DISORDERS OF) (BLOOD, GASES IN)
(CARDIAC GLYCOSIDES)

M-5

RUMANIA/Cultivated Plants - Commercial. Oil-Bearing. Sugar-Bearing.

Abs Jour : Ref Zhur - Biol., No 20, 1958, 91771

Author : Olteanu, Gh., Mumjieva, E.

Inst :

Title : Determination of the Optimum Period of Sowing Sugar Beets.

Orig Pub : Lucrarile inst. cercetari aliment., 1957, 1, 189-202

Abstract : The optimum period of sowing may be considered the time when work in the field can be performed. In delaying the sowing by 5-8 days the crop of beet roots is lowered on an average by 2860 kg/ha, and the sugar yield by 630 kg/ha. Delay of 8-15 days lowers the root crop by 4810 kh/ha and the sugar yield by 945 kg/ha. Pre-winter and winter sowing is partially applicable in regions with a sudden and stormy spring and also in those regions where the threat of spring drought exists. To obtain good results in such sowings it is necessary to sow in rows on

Card 1/2

MUMJIEVA, E.

RUMANIA / Cultivated Plants. Plants for Technical Use. Oil Plants. Sugar Plants. M

Abs Jour : Ref Zhur - Biol., No 8, 1958, No 34774

Authors : Olteanu, Gh.; Mumjieva, E.
Inst : Not given
Title : Basic Agricultural Methods for Obtaining High Sugar Beet Crops

Orig Pub : Rev. Ind. alimant. prod. vegetale, 1957, #3, 15-18

Abstract : No abstract.

Card 1/1

CAT. CODE : CULTIVATED PLANTS. Potatoes. Vegetables. Cucurbits.

AUTH. CODE : REF ZHUR - BIOLOGIYA, NO. 4, 1959, No. 15665

AUTHOR : Mumjinschi, P.

INST.

TITLE : Cultivation of Seeds of Vegetable Crops

ORIG. PUB. : Rev. rospd. agric. stat., 1958, No.5, 18-40

ABSTRACT : No abstract

CARD:

UZNADZE, E.D.; MUMLADZE, A.N.; SHISHNIASHVILI, M.Ye.

Electron microscopic investigation of structure formation in askangel suspensions. Soob. AN Gruz. SSR 20 no. 4:419-422 Ap '58. (MIRA 11:7)

1. Institut khimii im. P.G. Melikishvili AN GruzSSR. Predstavleno chlenom-korrespondentom akademii G.V. TStsishvili.
(Askangel) (Thixotropy)

SHISHNIASHVILI, M.Ye.; BATSANADZE, A.L.; MUMLADZE, A.N.

Highly concentrated colloid solutions. Part 1: Iron hydroxide sols. Trudy Inst.khim.AN Gruz.SSR 16:141-150 '62. (MIRA 16:4)

(Iron hydroxides) (Colloids)

MUMLADZE, F. I.

MUMLADZE, F. I.: "The dynamics of perielectrotonic phenomena". Moscow, 1955. Moscow City Pedagogical Inst imeni V. P. Potemkin, Chair of Human and Animal Physiology. (Dissertation for the Degree of Candidate of Biological Sciences)

SO: Knizhnaya Letopis', No. 40, 1 Oct 55

MUMLADZE, F.I.

Fluctuations in the excitability of the nerves. Uch. zar. MGU 169. '1-48.

Interference of parabiotic foci in somatic nerves. Ibid.:59-79.

Effect of the alteration of the proximal section of a nerve on the excitability at its other points. Ibid.:49-57 '62.
(MIRA 17:5)

MUMLADZE, G.Kh.

Thirst quenching beverage for metallurgical plant workers.
Metallurg 10 no.2:35 F '65. (MIRA 18:3)

1. Zamestitel' nachal'nika otdela tekhniki bezopasnosti Rustavskogo metallurgicheskogo zavoda.

MUMLADZE, I.D.

Study of some biological characters of Georgian alpine bees.
Soob. AN Gruz. SSR 29 no.6:723-728 D '62.

(MIRA 18:3)

1. Opytnaya stantsiya pchelovodstva, poselok Okrokana Gruzinskoy SSR. Submitted October 24, 1961.

MUMLADZE, N.I.

Two cases of aural angioma. Vest. otorinolar. 13 no.3:56-58 May-June 1951. (CLML 20:11)

1. Of the Clinic for Diseases of the Ear, Throat, and Nose (Director--Honored Worker in Science Prof. A.I. Fel'dman), Moscow Oblast Scientific-Research Clinical Institute (Director A.P. Muzychenko).

MUMLADZE, N. I.

Ear Tumors

Fibroma of the middle ear. Vest. oto-rin., 14, No. 3, 1952.

Monthly List of Russian Accessions, Library of Congress, October 1952. UNCLASSIFIED.

MUMLADZE, N. I.

Histogenesis of laryngeal and tracheal cartilage. Vest. otorin. no.5:59-67 '61. (MIRA 14:12)

1. Iz Otorinolaringologicheskogo otdeleniya Moskovskoy 1-y gorodskoy klinicheskoy bol'nitsy imeni N. I. Pirogova i laboratorii kafedry embriologii (zav. - prof. V. V. Popov) Moskovskogo gosudarstvennogo universiteta.

(CARTILAGE) (TRACHEA) (LARYNX)

L 22981-66 EWT(m)/T IJP(c)

ACC NR: AP6008551 SOURCE CODE: UR/0166/66/000/001/0074/0076

AUTHOR: Muminov, V.A.; Babal'yants, V.F.; Abdurakhmanov, A. Kh.

ORG: Institute of Nuclear Physics, AN UzSSR (Institut yadernoy fiziki AN UzSSR)

TITLE: A fast neutron scintillation counter

SOURCE: AN UzSSR. Izvestiya. Seriya fiziko-matematicheskikh nauk, no. 1, 1966, 74-76

TOPIC TAGS: fast neutron, neutron counter, scintillation counter

ABSTRACT: Many neutron recording devices are based on the recording of recoil protons, extensively employing scintillation counters which are, as a rule, sensitive to a gamma background. It is often difficult to exclude the effects of the gamma rays. However, it has been found that the effective time of the fluorescence of scintillations for neutrons is approximately twice higher than that for gamma rays, and of a stilbene crystal it is about 26 nanosec for protons and about 13 nanosec for electrons. In view of this, there is an opportunity for a more convenient separation of the pulses of fast neutrons from gamma quanta. The present authors used a fast neutron sensor described by G.G. Doroshenko and Ye. L. Stolyarova (PTE, 1961, no. 3) in the design of a neutron counter. The fast neutron scintillation counter consists of a stilbene crystal, an FEU-33 photomultiplier, and a discriminator made of two D2E diodes and two White cathode followers. It is concluded on the basis of operation of the counter that practically a complete cut-off of the

Card 1/2

L 22981-66

ACC NR: AP6008551

gamma background is achieved. The counter is stable during an 8-hr continuous operation. Orig. art. has: 1 figure.

SUB CODE: 18 / SUBM DATE: 09Jul65 / ORIG REF: 005 / OTH REF: 002

Card 2/2 LC

" MUMLADZE, V. V.

USSR/Physics - Dark Current 1951

"Measurement of the Dark Currents in Colored Crystals of KCl After Bombardment by a Beam of Electrons," M. P. Kalabukhov, V. V. Mumladze, Inst of Phys and Geophys, Acad Sci Georgian SSR

"Soob Ak Nauk Gruz SSR" Vol XII, No 1, pp 11-15

Expounds results of investigations of the temp dependence of dark currents in colored crystals of KCl after their bombardment by an electron beam. Describes app used in the expts. Concludes that the proposed mechanism of dark currents is correct and that the method of study-ing the dielectric currents or depolarization currents is convenient for studying the processes occurring in colored crystals of alkali-halides during photoconduction. Submitted 12 Apr 50 by A. I. Didebulidze, Act Mem, Acad Sci Georgian SSR. The Russian-language publication (nonperiodic serial) "Soobshcheniya Akademii Nauk Gruzinskoy SSR" (Communications of Acad Sci Georgian SSR) is published in Tbilisi by the Academy Press and represents a translation of the articles appearing in the Georgian-language publication "Soobshcheniya". The editors of "Soobshcheniya" are: P. I. Aglidze, N. A. Berdzenishvili, N. N. Kekelidze, N. I. Muskhelishvili, N. A. Kvitashvili, S. Ye. Chilaya, and A. G. Shanidze.

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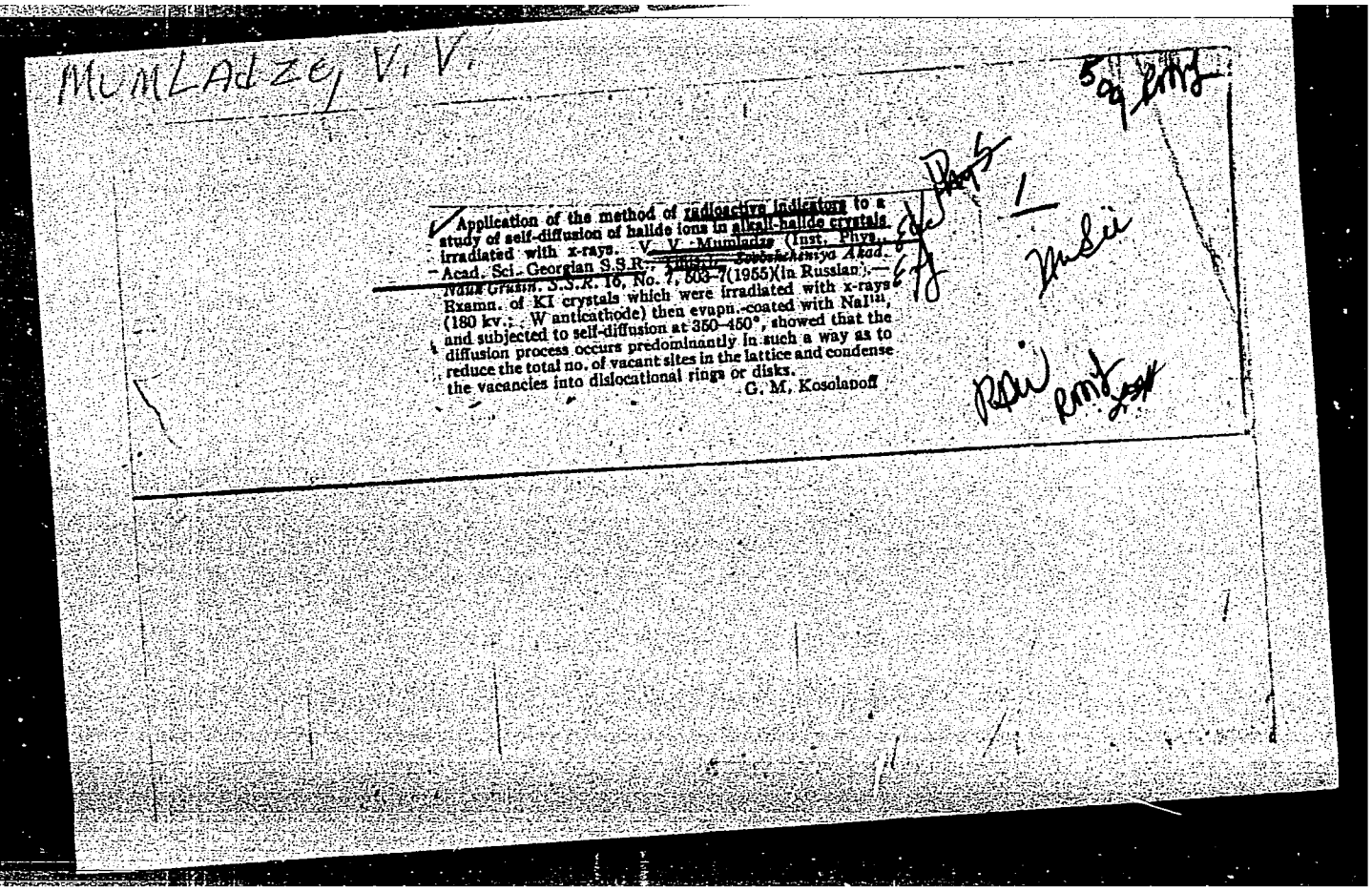

MUMLADZE, V. V.

Application of the method of radioactive indicators to a study of self-diffusion of halide ions in alkali-halide crystals irradiated with x-rays. V. V. Mumladze (Inst. Phys., Acad. Sci. Georgian S.S.R., Tbilisi). *Soobshcheniya Akad. Nauk Gruzin. S.S.R.* 16, No. 7, 603–7 (1955) (in Russian).—Examn. of KI crystals which were irradiated with x-rays (180 kv.; W anticathode) then evapn.-coated with NaI^{131}, and subjected to self-diffusion at 350–450°, showed that the diffusion process occurs predominantly in such a way as to reduce the total no. of vacant sites in the lattice and condense the vacancies into dislocational rings or disks.
G. M. Kosolapoff

MUMLADZE, V.V.

USSR/Solid State Physics - Phase Transformation in Solid Bodies E-5

Abs Jour : Ref Zhur - Fizika, No 1, 1958, 1005

Author : Mumladze, V.V.

Inst : Institute of Physics, Georgian SSR.

Title : Investigation of the Coefficients of Self-Diffusion of Ions of I and K in Alkali-Halide Crystals, Irradiated by X-rays.

Orig Pub : Izv. AN SSSR, ser. fiz., 1957, 21, No 1, 158-159

Abstract : Using the thin layer method (Referat Zhur Fizika, 1955, 13908) the author has measured the coefficient of diffusion D at 350 -- 500° of the ions $(I^*)^{131}$ and $(K^*)^{42}$ in single crystals of KI before and after exposure to X-rays. It was found that the exposure diminishes the value of D. This is explained by the fact that even though X-ray treatment produces new anion and cation vacancies, the subsequent

Card 1/2

MUMLADZE V. V.

PHASE I BOOK EXPLOITATION SOV/3500

Akademiya nauk Gruzinskoy SSR. Institut fiziki

Trudy, tom 6 (Transactions of the Physics Institute of the Academy of Sciences Gruzinskaya SSR, Vol. 6) Tbilisi, 1958. 282 p.

PURPOSE: This book is intended for physicists and physical chemists, and may be used by students taking advanced courses in physics and physical chemistry.

COVERAGE: This is a collection of articles by members of the Physics Institute on such subjects as helium-II, color centers, polarized deuterons in a magnetic field, effect of gamma-rays on copper oxides, digital computer programs, extensive air showers, effect of thermal gradient on crystals, and the theory of heavy unstable particles. The last article, in Georgian, is a brief resume of the development of physics in Georgia during the past 40 years. Abstracts in English are given after each article. No personalities are mentioned. References accompany each article.

TABLE OF CONTENTS:

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Transactions of the Physics Institute (Cont.)

Card 5/7

MUMLADZE, V.V.

Effect of the temperature gradient in crystals of alkali metal salts on their optical properties. Trudy Inst.fiz.AN Gruz.SSR 6:165-168 '58. (MIRA 15:4)
(Alkali metal satls—Optical properties)

MUMLADZE, V.V.

Use of the tagged atoms method in studying changes in the diffusion coefficient for potassium in potassium iodide crystals containing impurities in the form of heavy elements. Trudy Inst. fiz.AN Gruz.SSR 6:168-172 '58. (MIRA 15:4)
(Potassium iodide cyrstals) (Diffusion) (Radioactive tracers)

ACCESSION NR: AT4016310 S/0000/62/000/000/0287/0303

AUTHOR: Andronikashvili, E.L.; Politov, N.G.; Mumladze, V.V.; Vorozheykina, L.F

TITLE: Plasticity and thermal conductivity of defective alkali halide crystals

SOURCE: Vses. soveshch. po fiz. shchelochnogaloidn. kristallov. 2d, Riga, 1961. Trudy* Fiz. shchelochnogaloidn. kristallov (Physics of alkali halide crystals). Riga, 1962, 287-303

TOPIC TAGS: alkali halide crystal, plasticity, thermal conductivity, F-center, reactor radiation, crystallography, radiation defect, crystal physical property, hardness

ABSTRACT: In an extension of the authors' previous work, the influence of F-centers on plasticity and the influence of reactor radiation on plasticity and thermal conductivity were examined in Kcl crystals. The influence of reactor radiation on plasticity was also examined in LiF crystals. F-centers were produced by x-raying in a RUP-200-20-4 unit and an IRT-200 reactor was used for neutron and gamma radiations. Hardness was measured by the scratching and the pendulum swing damping methods. Optical absorption spectra were measur-

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ACCESSION NR: AT4016310

ed with an SF-4 spectrophotometer and an assembly, based on the principles of A.V. Ioffe and A.F. Ioffe and constructed in the authors' laboratory, was used for the determination of thermal conductivity. This method was applicable at close-to-room temperatures and, in a 5 minute procedure, produced results with an accuracy of 3-5 per cent. At least one hundred samples were examined. Curves for the dependence of hardness on the duration of x-raying and the concentration of F-centers showed a steady growth of plasticity of KCl crystals for the duration of x-raying, accompanied by the accumulation of F-centers. Under the influence of reactor radiation KCl crystals showed an initial growth of microhardness, which ceases when a dose of $\sim 10^{16}$ neutron/cm^2 is reached. In contrast, the resistance to plastic deformation and mechanical strength continued to grow in LiF crystals. The thermal conductivity of KCl crystals under reactor radiation followed a complex pattern, showing an initial decrease, followed by an increase as radiation continued. Orig. art. has: 11 figures.

ASSOCIATION: Institut fiziki AN Gruzinskoy SSR (Institute of Physics, Academy of Sciences of the Georgian SSR)

Card 2/3

[redacted], P. V.

Mytishchinskiy Car Construction Plant, -c1949-.

Engineer

"The utilization of heat control in spot welding in the manufacture of subway cars," Avtogen. Delo, No. 1, 1949.

18(5), 25(1,5) SOV/135-59-7-6/15

AUTHORS: Gel man, A.S. Doctor of Technical Sciences, Professor, and Slepak, E.S., Candidate of Technical Sciences (TsNIITMASh), Iashchiver, S.M., Candidate of Technical Sciences (NIITAVTOPROM), Mamrikov, P.V., (Mytishchi Machine Building Plant)

TITLE: Projection Spot Welding of Hot Rolled Steel

PERIODICAL: Svarochnoye proizvodstvo, 1959, Nr 7, pp 19-22 (USSR)

ABSTRACT: The authors review the experience in projection spot-welding of hot-rolled steel sheets at the Mytishchinskiy mashinostroitel'nyy zavod (Mytishchi Machine Building Plant). This method was suggested by TsNIITMASh several years ago, then studied by NIITAVTOPROM and finally it was introduced at the aforementioned plant. There it is used for the manufacture of semi-trailer parts with satisfactory results. The authors present operational data in tables and graphs. There are 3 photographs, 4 diagrams, 3 tables and 1 graph.

Card 1/2

Projection Spot Welding of Hot Rolled Steel

ASSOCIATION: TsNIITMASh; NIITAVTOPROM; Mytishchinskiy mashino-stroitel'nyy zavod (Mytishchi Machine Building Plant)

Card 2/2

S/125/60/000/010/009/015
A161/A133

AUTHOR: Mumrikov, P.V.

TITLE: The Practice of Automatic Submerged Arc Welding

PERIODICAL: Avtomaticheskaya svarka, 1960, No. 10, pp. 59-63

TEXT: The article contains a brief general description of new welding equipment at the Mytishchi Mechanical Engineering Plant that has replaced manual welding. The plant has manufactured 14 automatic welding apparatus. 10 of them fitted with hose type semiautomatic welders of different design. Trolley-mounted welders are used in the others, as well as suspended welding heads. The structures welded at the plant are from low-carbon, medium-carbon or low-alloy steel, mostly 2-12 mm thick, for some units steel of 25 mm thickness is used. The seam lengths vary between 700 and 4,000 mm. The work includes subway car chassis parts, brake drums, automobile semi-trailer support rollers, etc. A photo shows the welding of annular seams with a ПДШМ-500 (PDShM-500) hose welder with special ПДШ-500 (PDSh-500) welding head with funnel. Welding is effected partly with alternating and partly with di-

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